



BroadBand CTEG4M Series

Power Supply and Battery Enclosures

User's Manual



990-5521 07/02

Chapter 1 General Information

The CTEG4M Series Enclosures provide power source housing for broadband cable operations.

Safety

This Safety Guide contains important instructions that should be followed during installation and maintenance of the APC equipment and batteries. It is intended for APC customers who setup, install, relocate, or maintain APC equipment. **Changes and modifications to this unit not expressly approved by APC could void the warranty.**

Failure to observe these warnings may result in serious injury, death or damage to the equipment.

Electrical Warnings

Do not work alone under hazardous conditions.

Do not handle any metallic connector before the power has been disconnected.

Servicing this equipment may require working with protective covers removed and utility power connected. Use extreme caution during these procedures.

High current through conductive materials could cause severe burns.

When grounding cannot be verified, disconnect the equipment from the utility power outlet before installing or connecting to other equipment. Reconnect the power cord only after all connections are made.

Check that the power cord(s), plug(s), and sockets are in good condition.

Replacement of fuses or other parts must be with identical types and ratings. Substitution of nonidentical parts may cause safety and fire hazards.

Overhead Warnings

Never stand below anything while it is hoisted. Always wear a hard hat.

Lifting Warnings

Transformer modules are heavy. Use proper lifting techniques and equipment to avoid injury.

Battery Warnings

Danger of explosion if battery is incorrectly connected or replaced. Replace batteries only with same or equivalent type recommended by the manufacturer.

Specifications

Environmental Specifications

Operating Temperature	-40° F to 140° F (-40° C to 70° C)
Humidity	5% to 95% noncondensing within enclosure

Physical Specifications

Characteristic	Specification
Height	31" (79 cm)
Width	35" (89 cm)
Depth	25" (64 cm)
Weight <i>CTEG4M</i> <i>CTEG8M/12B</i>	120 lbs (54 kg) 85 lbs (39 kg)

Chapter 2 Installation and Maintenance

Only trained service personnel should install and maintain the Power Supply.

Prior to installing the enclosure AC line voltage must be routed to the installation site. Local, state, federal and/or National Electric Code (NEC) regulations regarding location, permits and electrical wiring must be adhered to.

Do not operate the Power Supply where the temperature and humidity are outside the specified limits. See *Specifications* in this manual.

Models Supported

CTEG4M	Encl, TSP (2), 4 Batteries, Generator Control Module
CTEG4M8M	Encl, TSP (1), 8 Batteries, Generator Interface
CTEG4M12B	Encl, 12 Batteries

Unpacking

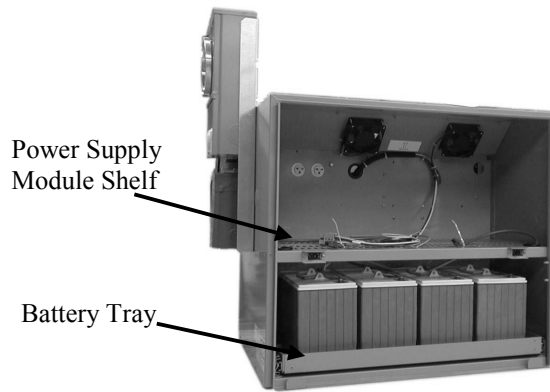
Inspect the unit upon receipt. Notify the carrier if there is damage.

The packaging is recyclable; save it for reuse or dispose of it properly.

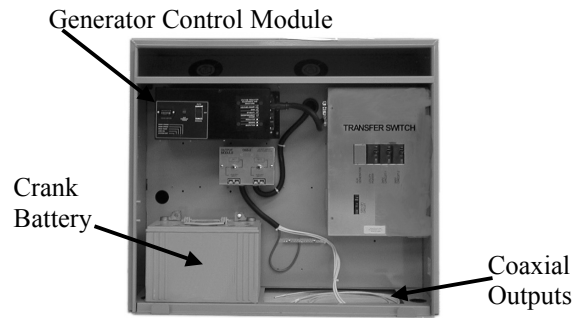
Check the package contents. The package contains the enclosure, battery cables, associated hardware, and product documentation.

CTEG4M: (9 cables)	15" black battery jumpers (3), 28" black (1), 48" black (1), 15" red (1), 29" red (2), 30" red (1)
CTEG4M8M: (12 cables)	15" black battery jumpers (4), 26" black (1), 27" black (1), 28" black (1), 56" black (1), 15" red (1), 25" red (1), 34" red (1), 35" red (1)
CTEG4M12B: (17 cables)	15" black battery jumpers (9), 30" black (2), 80" black (1), 18" red (1), 30" red (2), 45" red (2)
CTEG4M when wired with the CTEG12B: (8 cables)	15" black battery jumpers (3), 28" black (1), 48" black (1), 19" red (1), 29" red, 45" red (1)

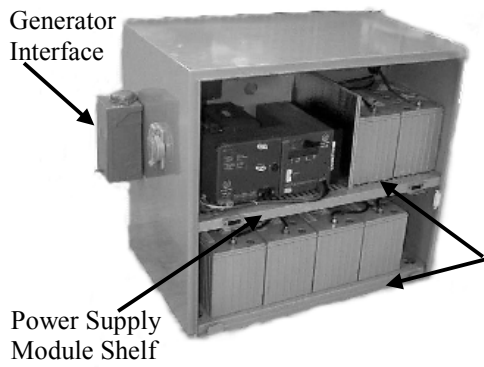
CTEG4M Front View



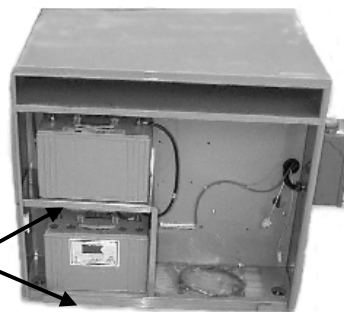
CTEG4M Rear View



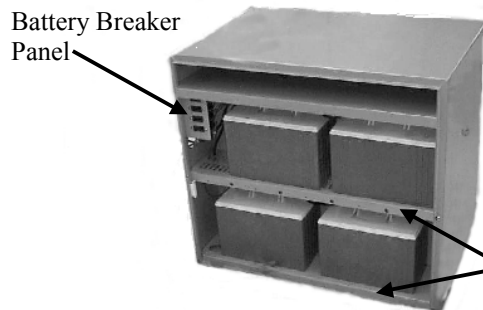
CTEG4M8M Front View



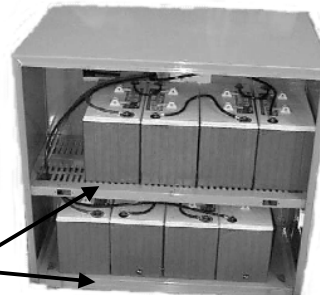
CTEG4M8M Rear View



CTEG4M12B Front View



CTEG4M12B Rear View



Installing the CTEG Enclosure

1. Install an APC approved concrete pad. Contact APC for more information.
2. Place the enclosure on the pad. The holes on the enclosure must be aligned with the anchor hooks on the pad.
3. Secure the enclosure to the pad.

Wiring

Grounding

1. Install and interconnect ground rods appropriate for proper grounding according to local electrical code requirements.
2. Route ground wires from the ground system into the bus bar located inside the enclosure.
3. Attach the ground wires to the common ground bus bar.

Input Wiring

1. Verify that the input utility circuit breaker located on the side of the enclosure is in the OFF position.
2. Route the utility input line through the conduit and into the enclosure.
3. Connect the utility main lines L1 and L2 (red and black), to the enclosure entrance terminals L1 and L2. Ensure that sufficient service loops are available.
4. Connect the utility neutral line, to the enclosure neutral bus strip.
5. Verify that the utility ground, is connected to the enclosure bus strip.
6. For three-wire input, connect a separate 12 AWG wire from the neutral bus strip to the ground bus strip.

Output Wiring

1. Install a pin connector (not furnished), to each of the output cables.
2. Attach the wires from the output terminal blocks to the pin on each cable.
3. Attach the ground wires to the cables.

Installing the Power Supply

Refer to the installation instructions included with the power supply components for details.

Options

Contact APC for information on available options.

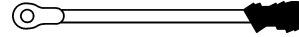
Connecting the Batteries



The battery circuit breaker must be in the OFF position prior to battery installation.

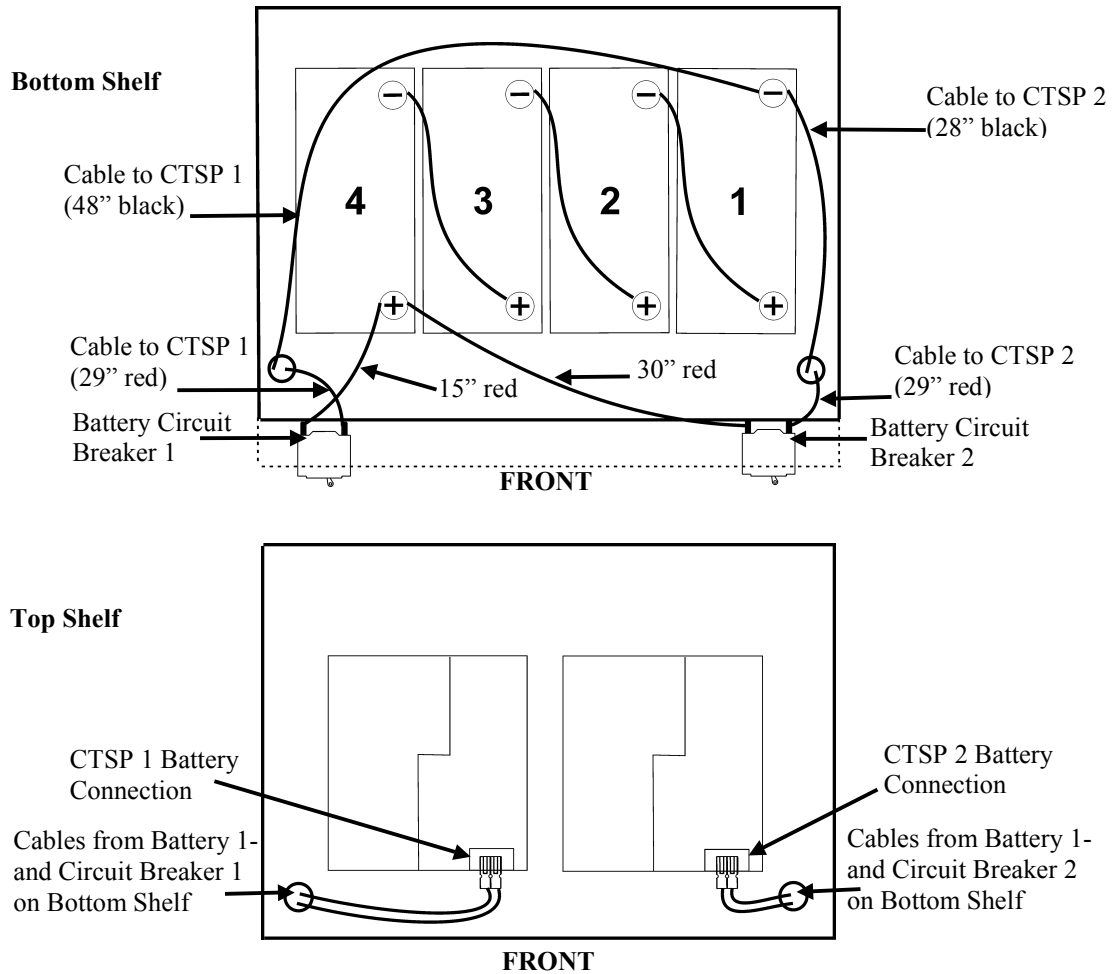
Use normal precautionary measures when wiring and connecting the batteries.

Tape one end of each jumper cable prior to installation.

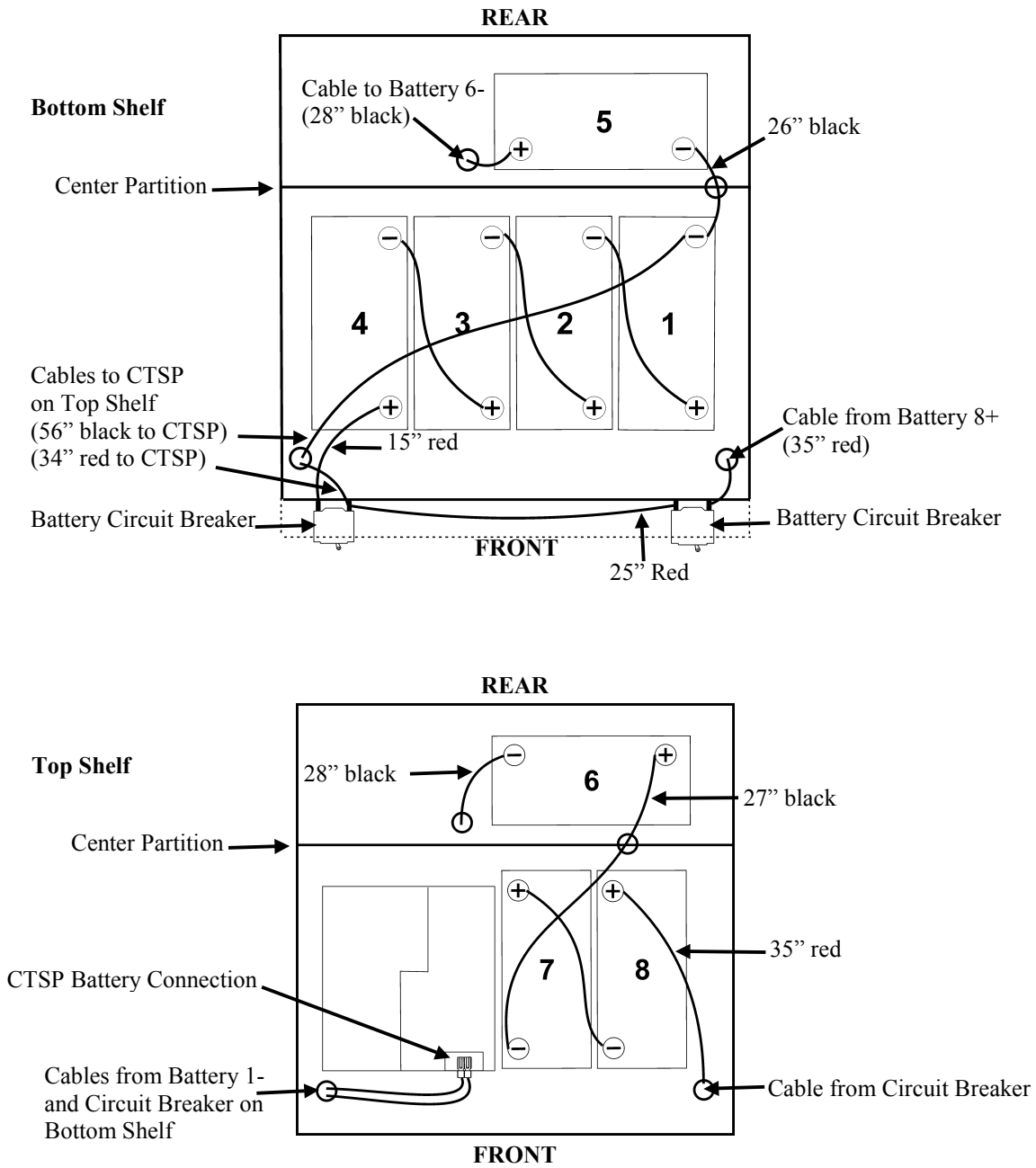


Be sure to deliver spent batteries to a recycling facility or ship to the manufacturer in the replacement battery packing material.

CTEG4M



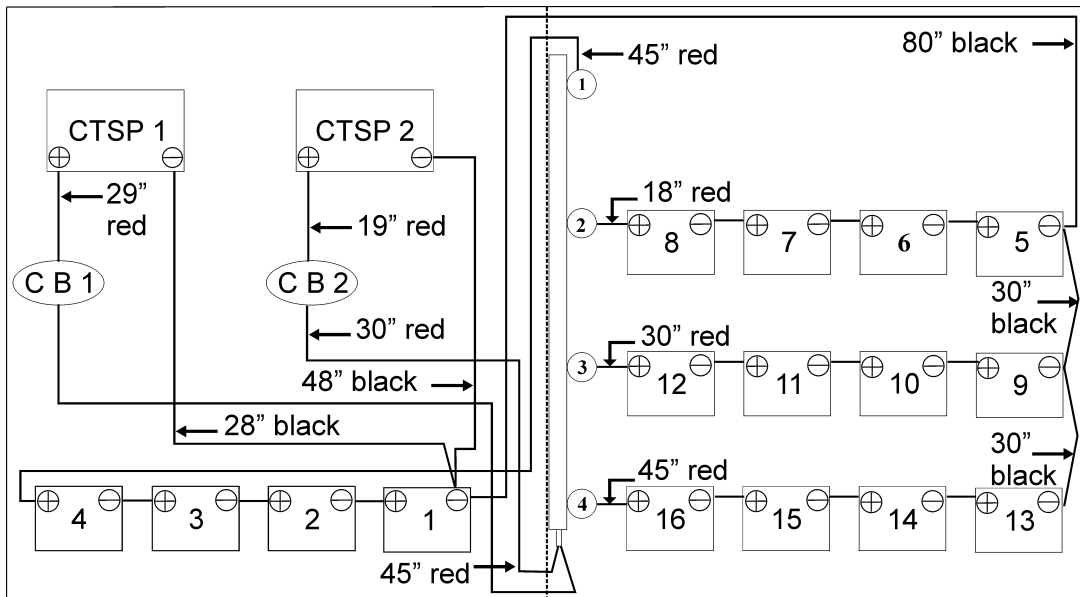
CTEG4M8M



CTEG4M12B

EG4M

EG4M12B



Chapter 3 Service, Contact and Warranty Information

Service

APC makes every effort to ensure parts and equipment arrive in working condition. Occasionally, it may be necessary to return parts or equipment that are not in working condition.

If the UPS requires service do not return it to the dealer. Instead, follow these steps:

1. Contact APC Customer Service through the APC web site, www.apc.com/support.
 - Note the product model number, the serial number, and the date purchased. If you call APC Customer Service, a technician will ask you to describe the problem and try to solve it over the phone. If this is not possible the technician will issue a Returned Material Authorization Number (RMA#).
 - If the product is under warranty, repairs are free. If not, there is a repair charge.
 - Procedures for servicing or returning products may vary internationally. Refer to the APC web site. Select the appropriate country from the country selection field. Select Support from the tab at the top of the web page.
2. Pack the product in its original packaging. If the original packing is not available, refer to the APC web site for information on obtaining appropriate packing materials.
 - Pack the unit properly to avoid damage in transit. Never use Styrofoam beads for packaging. Damage sustained in transit is not covered under warranty.
3. Mark the RMA# on the outside of the package.
4. Return the unit by insured, prepaid carrier to the address given to you by Customer Service.

How to Contact APC

In the USA ...	Outside the USA ...
Refer to the APC web site, www.apc.com/support .	Refer to the APC web site, www.apc.com . Select the appropriate country from the country selection field. Select the <i>Support</i> tab at the top of the web page.

Limited Warranty

American Power Conversion (APC) warrants its products to be free from defects in materials and workmanship for a period of two years from the date of purchase. Its obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. To obtain service under warranty you must obtain a Returned Material Authorization (RMA) number from customer support. Products must be returned with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment that has been damaged by accident, negligence, or misapplication or has been altered or modified in any way. This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase.

EXCEPT AS PROVIDED HEREIN, AMERICAN POWER CONVERSION MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL APC BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, APC is not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, costs of substitutes, claims by third parties, or otherwise.

Regulatory Approval



2002
Date of product declaration

CE Declaration of Conformity

We, the undersigned, declare under our sole responsibility that the equipment specified below conforms to the following standards and directives:

Standards to Which Conformity Declared:	EN 60950
Application of Council Directives:	73/23/EEC
Type of Equipment:	Power Supply
Model Numbers:	CTEG4M, CTEG4M8M, CTEG12B
Manufacturer's Name and Address:	American Power Conversion 132 Fairgrounds Road West Kingston, Rhode Island, 02892, USA -or- American Power Conversion (A. P. C.) b. v. Ballybritt Business Park Galway, Ireland -or- American Power Conversion 2nd Street PEZA Cavite Economic Zone Rosario, Cavite Philippines -or- American Power Conversion Main Avenue, Peza Rosario, Cavite, Philippines -or- APC (Suzhou) UPS Co., Ltd 339 Suhong Zhong Lu Suzhou Industrial Park Suzhou Jiangsu 215021 P.R. China
Importer's Name and Address:	American Power Conversion (A. P. C.) b. v. Ballybritt Business Park Galway, Ireland
Place:	N. Billerica, MA U.S.A.
Place:	Galway, Ireland
	Richard J. Everett, Sr. Regulatory Compliance Engineer <i>Richard J. Everett</i> 5 Jun 02
	Ray S. Ballard, Managing Director, Europe <i>Ray S. Ballard</i> 5 Jun 02

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